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INVESTIGATION REPORT
LEES LANE LANDFILL
LOUISVILLE, KENTUCKY

TDD NO. F4-8212-111
CONTRACT NO. 68-01-6699

PROJECT FOR
PERFORMANCE OF
REMEDIAL RESPONSE ACTIVITIES AT
UNCONTROLLED HAZARDOUS
SUBSTANCE FACILITIES—ZONE 1

NUS CORPORATION
SUPERFUND DIVISION

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R-586-9-3-2

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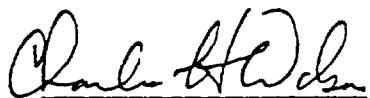
FOR THE

**HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY**

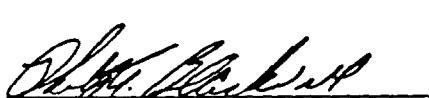
SEPTEMBER 7, 1983

**NUS CORPORATION
SUPERFUND DIVISION**

SUBMITTED BY


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REVIEWED BY


Philip Blackwell
Asst. Regional Project Manager

APPROVED BY


Murray Warner, P.E.
Regional Project Manager

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**INVESTIGATION REPORT
LEES LANE LANDFILL
LOUISVILLE, KENTUCKY**

I. INTRODUCTION

The Region IV Field Investigation Team (FIT) of Ecology and Environment, Incorporated conducted an investigation of the Lees Lane Landfill on November 3, 1982 at the request of the United States Environmental Protection Agency, Region IV, Air and Waste Management Division in accordance with the instructions contained in Technical Direction Document number F4-8210-08. This investigation was conducted by FIT members Charles H. Wilson, R. Roger Franklin, and Thomas L. Smith and Lewis F. Salgueno and William R. Bokey, Region IV, Environmental Services Division, United States Environmental Protection Agency. This report, concerning the results of this investigation, was written in accordance with Technical Direction Document F4-8212-111 issued to NUS Corporation.

The purpose of this investigation was to collect samples of leachate emanating from the western edge of the landfill and to analyze these samples to determine if they were contaminated by organic or inorganic constituents which do not naturally occur in the study area. The scope of this investigation was limited to the collection of leachate samples only. This investigation did not include any groundwater quality study through the installation of monitoring wells nor did it include geological evaluation of the site.

II. SITE CHARACTERIZATION

Lees Lane Landfill, a tract of land approximately 125 acres in size, is located along the Ohio River in Jefferson County, Kentucky, as shown on Figure 1. The landfill is approximately 4.4 miles southwest of Louisville, Kentucky. A location reference point of the landfill is at the intersection of Lees Lane and the levee which is located at 38° 11' 44" latitude and 85° 52' 17" longitude.

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Lees Lane Landfill first received wastes in 1948 from domestic, commercial, and industrial sources. Prior to and during its receiving wastes, the site was a sand and gravel quarry operated by the Hofgesang Company. In March 1975, home owners in Riverside Gardens, a community adjacent to the site, reported flash fires around their water heaters. Subsequent to an investigation and the detection of explosive levels of methane gas, seven families were evacuated from their homes near the site. In April 1975 the landfill was closed. Studies conducted by county, state, and federal agencies documented the presence of methane and other toxic gases in the subsurface east of the site. In 1978 an extensive monitoring program was conducted to define the gas migration problem. A gas venting system was installed in October 1980, which according to the Jefferson County Works Department, is operating satisfactorily (1).

An additional problem associated with this site was the discovery in February 1980 of approximately 400 exposed drums of hazardous materials on the Ohio River bank adjacent to the landfill. Five samples were collected from these drums by the Kentucky Department of Natural Resources and Environmental Protection. These drum samples contained 51 different organic compounds as well as high concentrations of copper, cadmium, nickel, lead, and chromium. Benzene, phenol, and their ethylated derivatives were also identified (2). During air quality monitoring, methane gas was identified along with vinyl chloride (3). Groundwater monitoring has resulted in the identification of both organic and inorganic contamination resulting from wastes on the site (4).

The identities and quantities of all chemical wastes reportedly buried at the site are unknown. The Eckhardt Report indicates a partial list of those waste generators which disposed of their wastes in the landfill (5). Table 1 lists some of these wastes generators and the types and amounts of wastes as shown in the Eckhardt Report.

The topography of Lees Lane Landfill has been determined mainly by the extensive man-made excavation and fill operations at the site. A secondary, but major influence on the topography has been the erosional and depositional processes of

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the Ohio River. The landfill, located in the Ohio River Terraces physiographic province, is approximately 5,000 feet in length and averages approximately 1,500 feet in width. The northern and middle portions of the landfill consist of level to gently sloping land. The southern portion is pocketed with excavations and relatively steep slopes. Three terraces, each approximately 20 feet wide, comprise the slope on the riverside of the landfill. Relatively steep erosional cuts are common along the southern portion of this slope. The site is bordered on the east and south by the Corps of Engineers flood protection levee. Elevations range from 410 feet above mean sea level (msl) along the Ohio River to 463 feet msl along the levee.

The natural soils of Lees Lane Landfill consisted of fine-sandy loam to silty loam of the Wheeling-Weinback-Huntington soil association. They were moderately- to well-drained soils on level to sloping topography (6). The excavation and landfill operations at this site have disturbed the natural soil conditions such that the physical and chemical properties of the soil cannot be defined without detailed soil testing.

III. DISCUSSION OF RESULTS

A. Analytical Laboratories

All water and sediment samples were analyzed for extractable organic compounds, purgeable organic compounds, pesticide PCB's, other chlorinated compounds, metals and cyanide. The organic analyses of the water and sediment samples were performed by California Analytical Laboratories, Inc., in Sacramento, California. The inorganic analyses of the water and sediment samples was performed by Rocky Mountain Analytical Laboratory in Arvada, Colorado. All analytical laboratory data are attached as Appendix A.

B. Description of the Leachate Sampling Point

A thorough search was conducted along the northwestern edge of the landfill to

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locate and sample all leachate points observed. Only one leachate point was detected during this search. There were several points along the river bank which may contain leachate during periods of heavy rainfall but these were not sampled during this investigation as they could not be discerned from erosion channels. The single flowing leachate point sampled during this investigation was located adjacent River Mile 616.1 or approximately 1,200 feet northeast of the confluence of Mill Creek and the Ohio River. The water samples were collected directly into the sample containers from a small pool formed by the leachate stream and the sediment samples were collected from the bed of the pool. The leachate sampling point, coded LL-LE-1W and LL-LE-1S, is shown on Figure 1.

During the field investigation, the pH of the leachate in the small pool was 7.25 standard units at a temperature of 13.6 degrees Celsius.

C. Results of Analyses

The results of the laboratory analysis of the water sample (LL-LE-1W) collected from the leachate point showed this sample to be free of organic contamination. As shown in Table 2, the results of the laboratory analysis showed the presence of 18 metals, including seven priority pollutant metals (7). The priority pollutant metals detected in this sample are arsenic (80 ug/l), cadmium (8 ug/l), chromium (100 ug/l), copper (200 ug/l), nickel (140 ug/l), lead (200 ug/l) and zinc (720 ug/l). Cyanide was also detected in this sample at a concentration of 4.0 ug/l.

The results of the laboratory analysis of the sediment sample collected from the leachate point, as shown in Table 3, showed the presence of 11 organic compounds including seven compounds listed as priority pollutants. All of the priority pollutant compounds detected during this study are generally associated with either the wood preserving industry or are normally found in asphalt paving (8) (9) (10) (11). Two of the four non-priority pollutant compounds detected are also associated with wood preserving or asphalt paving.

As shown in Table 4, generally, the same metals detected in the leachate point

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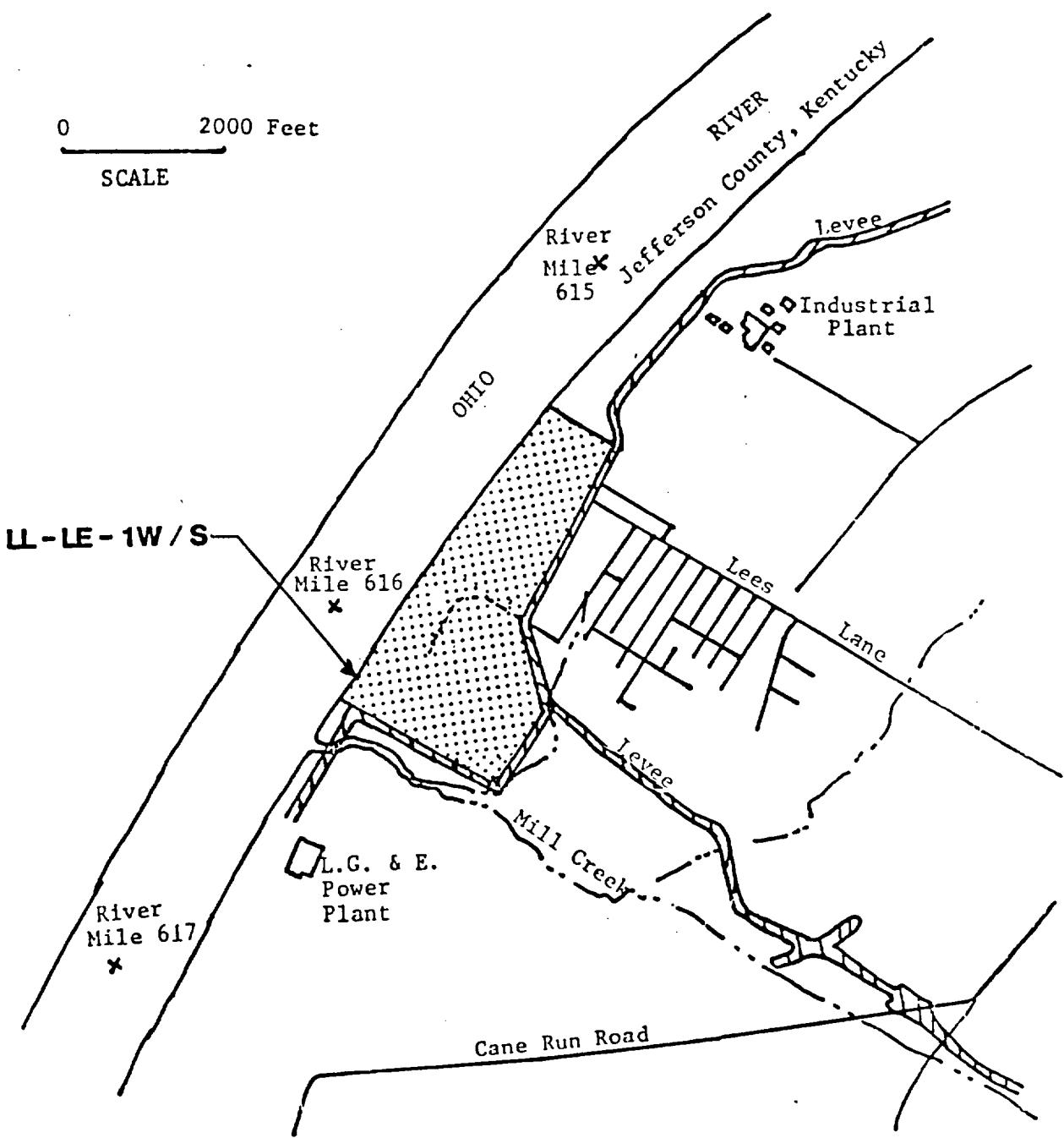
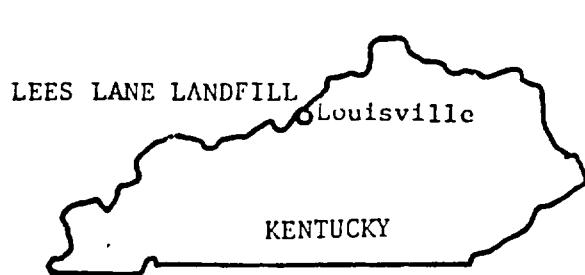
water sample were also detected in the leachate point sediment sample. Arsenic, cadmium and sodium were detected in the water sample but were not detected in the sediment sample. However, mercury (0.10 mg/kg) was detected in the sediment sample but was not detected in the water sample. The priority pollutant metals detected in the leachate point sediment sample were chromium (17 mg/kg), copper (16 mg/kg), nickel (24 mg/kg), lead (29 mg/kg), and zinc (120 mg/kg). Cyanide (0.26 mg/kg) was also detected in the sediment sample. The non-priority pollutant metals detected in the sediment sample are shown in Table 4.

IV. METHODOLOGY

All sample collection, sample preservation and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (12). All laboratory analyses and quality assurance procedures used during this investigation were in accordance with the standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual or as specified by the existing United States Environmental Protection Agency procedures and protocols for the contract analytical laboratory program (13).

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Based on Lanesville, IN - KY and Louisville West, KY USGS 7½' Quadrangle, 1960

FIGURE 1
LEES LANE LANDFILL
SAMPLING POINT LOCATION

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TABLE 1
Lees Lane Landfill
Hazardous Wastes Reported in Lees Lane Landfill (5)

<u>Company</u>	<u>Dates Used</u>	<u>Disposal Methods</u>	<u>Hundred Tons</u>	<u>Type of</u>
		<u>Waste</u>		
B.F. Goodrich	1948-1975	Industrial- Municipal Co-disposal	1689	heavy metals, trace metals, zinc, cadmium, copper, chromium (trivalent) lead, organic, halogenated, aliphatics, acrylates and latex emulsions, plastizers, resins, elastomers, misc.
Marshaw Chemical Co.	1950-1967	Industrial- Municipal Co-disposal	1	heavy metals, trace metals, arsenic, selenium, antimony, iron, manganese, magnesium, zinc, cadmium, copper, chromium (trivalent) chromium (hexavalent) lead, organics, insecticides and intermediates, amides, amines, imides, resins, inorganics, salts, miscellaneous, paints & pigments

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TABLE 1 (continued)
Lees Lane Landfill
Hazardous Wastes Reported in Lees Lane Landfill (5)

<u>Company</u>	<u>Dates Used</u>	<u>Disposal Methods</u>	<u>Hundred Tons</u>	<u>Type of</u>
		<u>Waste</u>		
Rohm & Hass	1962-1970	Industrial- Municipal Co-disposal Drummed Waste	343	acid solutions (with pH .3), organic acid manufacture, organics amides, amines, imides, plasticizers, resins, inorganics, salts
Celanese Corp.	1967-1974	Industrial- Municipal Co-disposal Drummed Waste	91	acid solutions (pH .3), heavy metals, trace metals, arsenic, selenium, antimony, mercury, iron, manganese, magnesium, zinc, cadmium, copper, chromium (trivalent), chromium (hexavalent), lead, organics, halogenated aliphatics, amides, amines, imides, resins, solvents (polar-except water) carbontetrachloride, other solvents (non polar), solvents (halogenated aliphatic) oils and oil sludges, esters and ethers, alcohols ketones and aldehydes,

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TABLE 1 (continued)

Lees Lane Landfill

Hazardous Wastes Reported in Lees Lane Landfill (5)

inorganics, salts, misc.,
paints and pigments,
asbestos, wastes with
flash point below 100°
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TABLE 2
Lees Lane Landfill
Inorganic Analysis
Leachate Point Water Sample
Sample Code LL-LE-1W

<u>Element</u>	<u>Concentration, ug/l</u>
Arsenic*	80
Barium	620
Cadmium*	8
Chromium*	100
Copper*	200
Nickel*	140
Lead*	200
Strontium	430
Titanium	550
Vanadium	120
Yttrium	48
Zinc*	720
Aluminum	60000
Manganese	5200
Calcium	110000
Magnesium	40000
Iron	110000
Sodium	19000
Cyanide*	4

* - Denotes priority pollutant

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TABLE 3
Lees Lane Landfill
Extractable Organic Analysis
Leachate Point Sediment Sample
Sample Code LL-LE-1S

<u>Compound</u>	<u>Concentration, ug/l (A)</u>
Phenanthrene*	430
Anthracene*	200 (B)
Pyrene*	500 (B)
Benzo (A) Anthracene*	290
Chrysene*	360
Benzo (B and/or K) Fluoranthene*	200 (B)
Benzo-A-Pyrene*	230
Benzoic Acid, Methyl Ester	1400 (C)
Ethyldecanol	1400 (C)
Benzofluorene	1400 (C)
Benzofluoranthene, (not B or K), 2 isomers	1400 (C)

* - Denotes priority pollutant

(A) - Dry weight basis

(B) - Estimated concentration

(C) - Presumptive evidence was found of the presence of this compound: concentration
is estimated.

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TABLE 4
Lees Lane Landfill
Inorganic Analysis
Leachate Point Sediment Sample
Sample Code LL-LE-1S

<u>Element</u>	<u>Concentration, mg/kg</u>
Barium	61
Chromium*	17
Copper*	16
Nickel*	24
Lead*	29
Strontium	18
Titanium	310
Vanadium	34
Yttrium	10
Zinc*	120
Mercury*	0.10
Aluminum	7300
Manganese	440
Calcium	6200
Magnesium	3400
Iron	27000
Cyanide*	0.26

* - Denotes priority pollutant

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REFERENCES

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4. Hazardous Waste Site Investigation, Lees Lane Landfill, Louisville, Kentucky, 1981: U.S. Environmental Protection Agency, Surveillance and Analysis Division, Region IV, Athens, Georgia.
5. Eckhardt, Bob, 1979, Hazardous Waste Disposal Report: U.S. House of Representatives, 96th Congress, First Session, Subcommittee On Oversight and Investigations of the Committee on Interstate and Foreign Commerce, Print 96-IFC 3B.
6. Zimmerman, W. H., 1966, Soil Survey of Jefferson County, Kentucky: U.S. Department of Agriculture, Soil Conservation Services Series 1962, no. 11, 137p.
7. Natural Resources Defense Council, Inc., et al, and EPA Consent decree dated June 7, 1976.
8. Lorenz, L. F. and L. R. Gjovik. 1972. Analyzing Creosote by Gas Chromatography: Relationship to Creosote Specifications. American Wood-Preservers' Association.
9. Hawley, Gessner G.; The Condensed Chemical Dictionary; Van Nostrand Reinhold Company, New York; 1971.
10. Encyclopedia of Chemical Technology (Kirk-Othmer); John Wiley and Sons, Inc., New York; 1967.
11. Clarke, George L. (Editor); The Encyclopedia of Chemistry; Reinhold Publishing Company, New York; 1966.
12. Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); U.S. Environmental Protection Agency, Region IV, Environmental Services Division; August 29, 1980.
13. Analytical Support Branch Operations and Quality Assurance Manual; U.S. Environmental Protection Agency, Region IV, Environmental Services Division; April 1982.

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APPENDIX A

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REG IV
ATHENS GEORGIA

03/01/83

MISCELLANEOUS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 83C 251 SAMPLE TYPE: SEDIM

PROJECT NO.: 83-021 PROGRAM ELEMENT: BSF
SOURCE: LEE'S LANE LANDFILL
CITY: LOUISVILLE STATE: KY

STATION I.D.: LL-LE-13
STORET STATION NO: 1

SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 0

COLLECTED BY: C.H. WILSON RECEIVED FROM:
SAMPLE REC'D: DATE: /TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHODS:

CASE NO.: 1399 ORG SAMPLE NO: D 1419 INORG SAMPLE NO.: MD 9117
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): RMAL

REMARKS:
REMARKS:

SAMPLE LOG VERIFIED BY: MAM DATA VERIFIED BY: JMS

REMARKS
V=PURGEABLE ORGANIC, E=EXTRACTABLE ORGANIC, P=PESTICIDE ANALYSIS

*****ANALYTICAL RESULTS*****

AN RESULTS IN: ug/kg	COMPOUND NAME
V 20U	ACETONE
V 20U	METHYL ETHYL KETONE
V 10U	CARBON DISULFIDE
V 20U	METHYL BUTYL KETONE
V 20U	METHYL ISOBUTYL KETONE
V 20U	STYRENE
E 1800U	VINYL ACETATE
E 20U	BENZOIC ACID
E 20U	2-METHYLPHENOL
E 20U	4-METHYLPHENOL
E 2000U	2,4,5-TRICHLOROPHENOL
E 20U	ANILINE
E 200U	BENZYL ALCOHOL
E 1000U	4-CHLOROANILINE
E 100U	DIBENZOFURAN
E 200U	2-METHYL NAPHTHALENE
E 1800U	2-NITROANILINE
E 1400U	3-NITROANILINE
E 2000U	4-NITROANILINE
E 1400JN	BENZOIC ACID, METHYL ESTER
E 1400JN	ETHYLDECANOL
E 1400JN	BENZOFLUORENE
E 1400JN	BENZOFLUORANTHENE (NOT B OR K) 2 ISOMERS

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM

**EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)**

SAMPLE TYPE I TESTIMONY

21 - PROGRAM ELEMENTS: SEC

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! START DATE/TIME 11/03/82 1115
! STOP DATE/TIME 00/00/00 0
WILSON RECEIVED FROM!
TIME 00/00/00 0 REC'D BY!

1

ORG SAMPLE NO. 01419 INORG SAMPLE NO. 8 MD 9117
ORGANIC INORGANIC ANAL LAB

ED BY I MAN DATA VERIFIED BY I DGR

***** ANALYTICAL RESULTS *****

RESULTS - UNITS COMPOUND N-1,2-DIPHENYLHYDRAZINE/AZOBENZENE

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NITROSO-DIMETHYLAMINE
2-DIPHENYLHYDRAZINE/ANISOBENZENE

UG/KC	BENZIDINE	3445674
UG/KC	3,4-DICHLOROBENZENE	3445374
UG/KC	1,4-DICHLOROBENZENE	3445374
UG/KC	6-(2-CHLOROETHYL) ETHER	3445261
UG/KC	HEX(2-CHLOROISOPROPYL) ETHER	3445261
UG/KC	NITROBENZENE	344450
UG/KC	HEXA(2-CHLOROBUTADIENE)	344450
UG/KC	1-(2,4-TRICHLOROBENZENE	344445
UG/KC	1,2,4-(2-CHLOROETHOXY) METHANE	344445
UG/KC	ISOPHORONE	3444281
UG/KC	HEXA(2-CHLOROCYCLOPENTADIENE (HCCP))	3444281
UG/KC	2-CHLORONAPHTHALENE	344389
UG/KC	ACENAPHTHYLENE	344389
UG/KC	OXYETHYL PHTHALATE	344379
UG/KC	2'-4'DINITROTOLUENE	344379
UG/KC	2,6'DINITROTOLUENE	344379
UG/KC	4-CHLOROPHENYL PHENYL ETHER	344379
UG/KC	FLUORENE	344379
UG/KC	DIETHYL PHTHALATE	344379
UG/KC	4-NITROSO(DIPHENYLAMINE)/DIPHENYLAMINE	344379
UG/KC	HEXA(2-CHLOROBENZENE (HCB))	344379
UG/KC	4-AROMOPHENYL PHENYL ETHER	344379
UG/KC	PHEMANTHRENE	344379
UG/KC	ANTHRAHCENE	344379
UG/KC	DI- <i>n</i> -BUTYLPHTHALATE	344379
UG/KC	FLUORANTHENE	344379
UG/KC	PYRENE	344379
UG/KC	BENZYL BUTYL PHTHALATE	344372
UG/KC	BIS(2-ETHYLHEXYL) PHTHALATE	344295
UG/KC	BENZO[CA]ANTHRAHCENE	344295
UG/KC	CHRYSENE	344295
UG/KC	5,7-DICHLOROBENZIDINE	344295
UG/KC	DI-N-OCTYL PHTHALATE	344295
UG/KC	BENZO[SR AND/OR K]FLUORANTHENE (TOTAL)	344295
UG/KC	BENZO[SB AND/OR K]FLUORANTHENE (TOTAL)	344295
UG/KC	BENZO-A-PYRENE	344295
UG/KC	INDENO[1,2,3-CD] PYRENE	344295
UG/KC	OIRENZO[CA]ANTHRAHCENE	344295
UG/KC	2-CHLOROPHENYL PERYLENE	344295
UG/KC	2-NITROPHENOL	344295
UG/KC	PHENOL	344295
UG/KC	2,4-DIMETHYLPHENOL	344295
UG/KC	2,4-DICHLOROPHENOL	344295
UG/KC	2,4,6-TRICHLOROPHENOL	344295
UG/KC	4-CHLORO-3-METHYLPHENOL	344295
UG/KC	2,4-DINITROPHENOL	344295
UG/KC	2-METHYL-4,6-DINITROPHENOL	344295
UG/KC	PENTACHLOROPHENOL	344295
UG/KC	4-NITROPHENOL	344295
UG/KC	4-NITROUREA	344295

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-6ES, REG IV
ATHENS, GEORGIA

01/03/83

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 83C 235

SAMPLE TYPE: SOIL

) PROJECT NO.: 83-0210 PROGRAM ELEMENT: 8SF
SOURCE: LEE'S LAKE LANDFILL STATE: KY
CITY: LOUISVILLE
) STATION ID: LLE-1 DEECHATTE #1 SOIL
STATION STATION NO:
) SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 0
) COLLECTED BY: CHAUNISON RECEIVED FROM: BILL BOKEY
SAMPLE REC'D: DATE/TIME 11/05/82 REC'D BY: D COQUERT
SEALED: YES
) CHEMIST: MAN
ANALYTICAL METHOD:
)

REMARK!
REMARK!

SAMPLE LOG VERIFIED BY: TEE SAMPLE DATA VERIFIED BY: MAN

)REMARKS
>DATA REPORTED ON DRY WEIGHT BASIS

FOOTNOTES
*)A-NOT ANALYZED
*)J-ESTIMATED VALUE
*)K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*)L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*)U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*NAI-INDICENCE OF PRESENCE OF MATERIAL

*W-WEIGHT

*MG/KG-MILLIGRAMS PER KILOGRAM

*PPM-MILLIGRAMS PER MILLILITER

*****ANALYTICAL RESULTS*****

STOKE	RESULTS	UNITS	ELEMENT
01003	88U	MG/KG	SILVER
01023	MG/KG	ARSENIC	
01008	61B	MG/KG	BARIUM
01028	33U	MG/KG	BERYLLIUM
01029	102C	MG/KG	CADMIUM
01043	117A	MG/KG	CHROMIUM
01063	66U	MG/KG	COPPER
01068	24U	MG/KG	MOLYBDENUM
01098	29U	MG/KG	NICKEL
01148	30U	MG/KG	ANTIMONY
01103	39U	MG/KG	SELENIUM
01063	45U	MG/KG	TIN
01153	51U	MG/KG	TELLURIUM
01153	33U	MG/KG	TITANIUM
01088	34U	MG/KG	VANADIUM
01093	1120	MG/KG	YTTRIUM
01163	10	MG/KG	ZIRCONIUM
01163	7192	MG/KG	MERCURY
01108	07300	MG/KG	ALUMINUM
01053	6400	MG/KG	MANGANESE
00917	6200	MG/KG	CALCIUM
00924	3400	MG/KG	MAGNESIUM
01170	27000	MG/KG	IRON
00934	300U	MG/KG	SODIUM
00934	25%	MG/KG	CHROMIUM, HEXAVALENT MOISTURE
70320			

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD, REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS UNITS PARAMETER
0.26 MG/KG CYANIDE

STORET
00721

01/03/83

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 83C-235 SAMPLE TYPE: SOIL

PROJECT NO.: 83-0210 PROGRAM ELEMENT: SSF
SOURCE: LEE'S LANE LANDFILL

CITY: LOUISVILLE STATE: KY

STATION I.D.: LL-LE-1 LEACHATE #1 SOIL
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 0

COLLECTED BY: C.H. WILSON RECEIVED FROM: BILL BOKEY
SAMPLE REC'D: DATE/TIME 11/05/82 735 REC'D BY: D COLQUITT
SEALED: YES

CHEMIST: GKB CHEMIST:
ANALYTICAL METHOD:

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: TBS DATA VERIFIED BY: GKB

REMARKS
>DATA REPORTED ON DRY WEIGHT BASIS

*****FOOTNOTES*****

*A-AVERAGE VALUE *NA=NOT ANALYZED *NAI-INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
ATHENS, GEORGIA

02/24/83 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 83C 251 SAMPLE TYPE: SEDIM

PROJECT NO.: 83-021 PROGRAM ELEMENT: SSF
SOURCE: LEGISI SLANE LANDFILL STATE: KY
CITY: LOUISVILLE

STATION STATION NO.: 15

SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 00

COLLECTED BY: "H WILSON RECEIVED FROM:
SAMPLE REC'D DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: HUR
ANALYTICAL METHOD:

CASE NO.: 1399 ORG SAMPLE NO: D 1419 INORG SAMPLE NO.: MD 9117
CONTRACT LABORATORY(CORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): RML

REMARKS:
REMARKS:

SAMPLE LOG VERIFIED BY: HAW DATA VERIFIED BY: JHT
REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND	STORED
100	UG/KG	AUDRIN	3933
100	UG/KG	HEPTACHLOR	3942
100	UG/KG	HEPTACHLOR EPOXIDE	3943
100	UG/KG	BETA-BHC	3944
100	UG/KG	GAMMA-BHC	3945
100	UG/KG	DELTA-BHC	3946
100	UG/KG	ENDOSULFAN I (ALPHA)	3947
100	UG/KG	DIETYLDRIN	3948
100	UG/KG	4,4'-DDT	3949
100	UG/KG	4,4'-DDE	3950
100	UG/KG	4,4'-DDD	3951
100	UG/KG	ENDRIN	3952
100	UG/KG	ENDOSULFAN II (BETA)	3953
100	UG/KG	ENDOSULFAN SULFATE MIXTURE	3954
100	UG/KG	CHLORDANE (TECHCLOR 1242)	3955
100	UG/KG	PCP	3956
100	UG/KG	PCP	3957
100	UG/KG	PCP	3958
100	UG/KG	PCP	3959
100	UG/KG	PCP	3960
100	UG/KG	PCP	3961
100	UG/KG	PCP	3962
100	UG/KG	PCP	3963
100	UG/KG	PCP	3964
100	UG/KG	PCP	3965
100	UG/KG	TGXAPHEN	3966
100	UG/KG	TGXAPHEN ALDEHYDE	3967
100	UG/KG	TCO(DIOXIN)	3968
100	UG/KG	CHLORDENE /2	3969
100	UG/KG	CHLORDENE /2	3970
100	UG/KG	CHLORDENE /2	3971
100	UG/KG	CHLORDENE /2	3972
100	UG/KG	CHLORDENE /2	3973
100	UG/KG	CHLORDENE /2	3974
100	UG/KG	CHLORDENE /2	3975
100	UG/KG	CHLORDENE /2	3976
100	UG/KG	CHLORDENE /2	3977
100	UG/KG	CHLORDENE /2	3978
100	UG/KG	CHLORDENE /2	3979
100	UG/KG	CHLORDENE /2	3980
100	UG/KG	CHLORDENE /2	3981
100	UG/KG	CHLORDENE /2	3982
100	UG/KG	CHLORDENE /2	3983
100	UG/KG	CHLORDENE /2	3984
100	UG/KG	CHLORDENE /2	3985
100	UG/KG	CHLORDENE /2	3986
100	UG/KG	CHLORDENE /2	3987
100	UG/KG	CHLORDENE /2	3988
100	UG/KG	CHLORDENE /2	3989
100	UG/KG	CHLORDENE /2	3990
100	UG/KG	CHLORDENE /2	3991
100	UG/KG	CHLORDENE /2	3992
100	UG/KG	CHLORDENE /2	3993
100	UG/KG	CHLORDENE /2	3994
100	UG/KG	CHLORDENE /2	3995
100	UG/KG	CHLORDENE /2	3996
100	UG/KG	CHLORDENE /2	3997
100	UG/KG	CHLORDENE /2	3998
100	UG/KG	CHLORDENE /2	3999
100	UG/KG	CHLORDENE /2	4000
100	UG/KG	CHLORDENE /2	4001
100	UG/KG	CHLORDENE /2	4002
100	UG/KG	CHLORDENE /2	4003
100	UG/KG	CHLORDENE /2	4004
100	UG/KG	CHLORDENE /2	4005
100	UG/KG	CHLORDENE /2	4006
100	UG/KG	CHLORDENE /2	4007
100	UG/KG	CHLORDENE /2	4008
100	UG/KG	CHLORDENE /2	4009
100	UG/KG	CHLORDENE /2	4010
100	UG/KG	CHLORDENE /2	4011
100	UG/KG	CHLORDENE /2	4012
100	UG/KG	CHLORDENE /2	4013
100	UG/KG	CHLORDENE /2	4014
100	UG/KG	CHLORDENE /2	4015
100	UG/KG	CHLORDENE /2	4016
100	UG/KG	CHLORDENE /2	4017
100	UG/KG	CHLORDENE /2	4018
100	UG/KG	CHLORDENE /2	4019
100	UG/KG	CHLORDENE /2	4020
100	UG/KG	CHLORDENE /2	4021
100	UG/KG	CHLORDENE /2	4022
100	UG/KG	CHLORDENE /2	4023
100	UG/KG	CHLORDENE /2	4024
100	UG/KG	CHLORDENE /2	4025
100	UG/KG	CHLORDENE /2	4026
100	UG/KG	CHLORDENE /2	4027
100	UG/KG	CHLORDENE /2	4028
100	UG/KG	CHLORDENE /2	4029
100	UG/KG	CHLORDENE /2	4030
100	UG/KG	CHLORDENE /2	4031
100	UG/KG	CHLORDENE /2	4032
100	UG/KG	CHLORDENE /2	4033
100	UG/KG	CHLORDENE /2	4034
100	UG/KG	CHLORDENE /2	4035
100	UG/KG	CHLORDENE /2	4036
100	UG/KG	CHLORDENE /2	4037
100	UG/KG	CHLORDENE /2	4038
100	UG/KG	CHLORDENE /2	4039
100	UG/KG	CHLORDENE /2	4040
100	UG/KG	CHLORDENE /2	4041
100	UG/KG	CHLORDENE /2	4042
100	UG/KG	CHLORDENE /2	4043
100	UG/KG	CHLORDENE /2	4044
100	UG/KG	CHLORDENE /2	4045
100	UG/KG	CHLORDENE /2	4046
100	UG/KG	CHLORDENE /2	4047
100	UG/KG	CHLORDENE /2	4048
100	UG/KG	CHLORDENE /2	4049
100	UG/KG	CHLORDENE /2	4050
100	UG/KG	CHLORDENE /2	4051
100	UG/KG	CHLORDENE /2	4052
100	UG/KG	CHLORDENE /2	4053
100	UG/KG	CHLORDENE /2	4054
100	UG/KG	CHLORDENE /2	4055
100	UG/KG	CHLORDENE /2	4056
100	UG/KG	CHLORDENE /2	4057
100	UG/KG	CHLORDENE /2	4058
100	UG/KG	CHLORDENE /2	4059
100	UG/KG	CHLORDENE /2	4060
100	UG/KG	CHLORDENE /2	4061
100	UG/KG	CHLORDENE /2	4062
100	UG/KG	CHLORDENE /2	4063
100	UG/KG	CHLORDENE /2	4064
100	UG/KG	CHLORDENE /2	4065
100	UG/KG	CHLORDENE /2	4066
100	UG/KG	CHLORDENE /2	4067
100	UG/KG	CHLORDENE /2	4068
100	UG/KG	CHLORDENE /2	4069
100	UG/KG	CHLORDENE /2	4070
100	UG/KG	CHLORDENE /2	4071
100	UG/KG	CHLORDENE /2	4072
100	UG/KG	CHLORDENE /2	4073
100	UG/KG	CHLORDENE /2	4074
100	UG/KG	CHLORDENE /2	4075
100	UG/KG	CHLORDENE /2	4076
100	UG/KG	CHLORDENE /2	4077
100	UG/KG	CHLORDENE /2	4078
100	UG/KG	CHLORDENE /2	4079
100	UG/KG	CHLORDENE /2	4080
100	UG/KG	CHLORDENE /2	4081
100	UG/KG	CHLORDENE /2	4082
100	UG/KG	CHLORDENE /2	4083
100	UG/KG	CHLORDENE /2	4084
100	UG/KG	CHLORDENE /2	4085
100	UG/KG	CHLORDENE /2	4086
100	UG/KG	CHLORDENE /2	4087
100	UG/KG	CHLORDENE /2	4088
100	UG/KG	CHLORDENE /2	4089
100	UG/KG	CHLORDENE /2	4090
100	UG/KG	CHLORDENE /2	4091
100	UG/KG	CHLORDENE /2	4092
100	UG/KG	CHLORDENE /2	4093
100	UG/KG	CHLORDENE /2	4094
100	UG/KG	CHLORDENE /2	4095
100	UG/KG	CHLORDENE /2	4096
100	UG/KG	CHLORDENE /2	4097
100	UG/KG	CHLORDENE /2	4098
100	UG/KG	CHLORDENE /2	4099
100	UG/KG	CHLORDENE /2	4100
100	UG/KG	CHLORDENE /2	4101
100	UG/KG	CHLORDENE /2	4102
100	UG/KG	CHLORDENE /2	4103
100	UG/KG	CHLORDENE /2	4104
100	UG/KG	CHLORDENE /2	4105
100	UG/KG	CHLORDENE /2	4106
100	UG/KG	CHLORDENE /2	4107
100	UG/KG	CHLORDENE /2	4108
100	UG/KG	CHLORDENE /2	4109
100	UG/KG	CHLORDENE /2	4110
100	UG/KG	CHLORDENE /2	4111
100	UG/KG	CHLORDENE /2	4112
100	UG/KG	CHLORDENE /2	4113
100	UG/KG	CHLORDENE /2	4114
100	UG/KG	CHLORDENE /2	4115
100	UG/KG	CHLORDENE /2	4116
100	UG/KG	CHLORDENE /2	4117
100	UG/KG	CHLORDENE /2	4118
100	UG/KG	CHLORDENE /2	4119
100	UG/KG	CHLORDENE /2	4120
100	UG/KG	CHLORDENE /2	4121
100	UG/KG	CHLORDENE /2	4122
100	UG/KG	CHLORDENE /2	4123
100	UG/KG	CHLORDENE /2	4124
100	UG/KG	CHLORDENE /2	4125
100	UG/KG	CHLORDENE /2	4126
100	UG/KG	CHLORDENE /2	4127
100	UG/KG	CHLORDENE /2	4128
100	UG/KG	CHLORDENE /2	4129
100	UG/KG	CHLORDENE /2	4130
100	UG/KG	CHLORDENE /2	4131
100	UG/KG	CHLORDENE /2	4132
100	UG/KG	CHLORDENE /2	4133
100	UG/KG	CHLORDENE /2	4134
100	UG/KG	CHLORDENE /2	4135
100	UG/KG	CHLORDENE /2	4136
100	UG/KG	CHLORDENE /2	4137
100	UG/KG	CHLORDENE /2	4138
100	UG/KG	CHLORDENE /2	4139
100	UG/KG	CHLORDENE /2	4140
100	UG/KG	CHLORDENE /2	4141
100	UG/KG	CHLORDENE /2	4142
100	UG/KG	CHLORDENE /2	4143
100	UG/KG	CHLORDENE /2	4144
100	UG/KG	CHLORDENE /2	4145
100	UG/KG	CHLORDENE /2	4146
100	UG/KG	CHLORDENE /2	4147
100	UG/KG	CHLORDENE /2	4148
100	UG/KG	CHLORDENE /2	4149
100	UG/KG	CHLORDENE /2	4150
100	UG/KG	CHLORDENE /2	4151
100	UG/KG	CHLORDENE /2	4152
100	UG/KG	CHLORDENE /2	4153
100	UG/KG	CHLORDENE /2	4154
100	UG/KG	CHLORDENE /2	4155
100	UG/KG	CHLORDENE /2	4156
100	UG/KG	CHLORDENE /2	4157
100	UG/KG	CHLORDENE /2	4158
100	UG/KG	CHLORDENE /2	4159
100	UG/KG	CHLORDENE /2	4160
100	UG/KG	CHLORDENE /2	4161
100	UG/KG	CHLORDENE /2	4162
100	UG/KG	CHLORDENE /2	4163
100	UG/KG	CHLORDENE /2	4164
100	UG/KG	CHLORDENE /2	4165
100	UG/KG	CHLORDENE /2	4166
100	UG/KG	CHLORDENE /2	4167
100	UG/KG	CHLORDENE /2	4168
100	UG/KG	CHLORDENE /2	4169
100	UG/KG	CHLORDENE /2	4170
100	UG/KG	CHLORDENE /2	4171
100	UG/KG	CHLORDENE /2	4172
100	UG/KG	CHLORDENE /2	4173
100	UG/KG	CHLORDENE /2	4174
100	UG/KG	CHLORDENE /2	4175
100	UG/KG	CHLORDENE /2	4176
100	UG/KG	CHLORDENE /2	4177
100	UG/KG	CHLORDENE /2	4178
100	UG/KG	CHLORDENE /2	4179
100	UG/KG	CHLORDENE /2	4180
100	UG/KG	CHLORDENE /2	4181
100	UG/KG	CHLORDENE /2	4182
100	UG/KG	CHLORDENE /2	4183
100	UG/KG	CHLORDENE /2	4184
100	UG/KG	CHLORDENE /2	4185
100	UG/KG	CHLORDENE /2	4186
100	UG/KG	CHLORDENE /2	4187
100	UG/KG	CHLORDENE /2	4188
100	UG/KG	CHLORDENE /2	4189
100	UG/KG	CHLORDENE /2	4190
100	UG/KG	CHLORDENE /2	4191
100	UG/KG	CHLORDENE /2	4192
100	UG/KG	CHLORDENE /2	4193
100	UG/KG	CHLORDENE /2	4194
100	UG/KG	CHLORDENE /2	4195
100	UG/KG	CHLORDENE /	

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM

EPA-EFSR REG IV

ATHENS, GEORGIA

02/24/83

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(ORY WT)

SAMPLE NO.: 83C 251 -- SAMPLE TYPE: SEDIM

RESULTS	UNITS	COMPOUND	STORE
1000	UG/KG	ACROLEIN	34213
1000	UG/KG	ACRYLONITRILE	34416
1000	UG/KG	CHLOROMETHANE	34416
1000	UG/KG	BROMOMETHANE	34416
1000	UG/KG	VINYL CHLORIDE	34416
1000	UG/KG	CHLOROETHANE	34416
1000	UG/KG	METHYLENE CHLORIDE	34416
1000	UG/KG	1,1-DICHLOROETHENE	34416
1000	UG/KG	1,2-DICHLOROETHENE	34416
1000	UG/KG	CHLOROFORM	34416
1000	UG/KG	1,2-DICHLOROETHANE	34416
1000	UG/KG	1,1,1-TRICHLOROETHANE	34416
1000	UG/KG	CHLORODIBROMIDE	34416
1000	UG/KG	BROMODICHLOROETHANE	34416
1000	UG/KG	1,2-DICHLOROPROPANE	34416
1000	UG/KG	TRANS-1,3-DICHLOROPROPENE	34416
1000	UG/KG	TRICHLOROETHENE	34416
1000	UG/KG	PERBENZENE	34416
1000	UG/KG	DIBROMOETHANE	34416
1000	UG/KG	1,2-TRICHLOROMETHANE	34416
1000	UG/KG	1,1,2-TRICHLOROPROPENE	34416
1000	UG/KG	1,3-DICHLOROETHYL VINYL ETHER	34416
1000	UG/KG	TRICHLOROPROPENE	34416
1000	UG/KG	BROMOFORM	34416
1000	UG/KG	1,1,2,2-TETRACHLOROETHANE	34416
1000	UG/KG	TETRACHLOROETHENE	34416
1000	UG/KG	TOULUENE	34416
1000	UG/KG	CHLOROBENZENE	34416
1000	UG/KG	ETHYLBENZENE	34416
1000	UG/KG	XYLYLENE(MIXED)	34416
1000	UG/KG	1,3-PHENYLENE(MIXED)	34416
1000	UG/KG	MOISTURE	34416

LEE 001

000493

70320

PROJECT NO.: 83-021 -- PROGRAM ELEMENT: SSF
SOURCE: LEE'S LANE LANDFILL STATE: KY
CITY: LOUISVILLE STATION ID: LLOU-13
STORAGE/STATION NO.:
SAMPLE COLLECTION: START DATE/TIME: 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME: 00/00/00 0
COLLECTED BY: GENE WILSON RECEIVED FROM: REC'D BY:
SAMPLE REC'D: DATE/TIME: 00/00/00
SEALED:
CHEMICAL FAM
ANALYTICAL METHODS:
CASE NO.: 1399 ORG SAMPLE NO.: D 1419 INORG SAMPLE NO.: MD 9117
CONTRACT LABORATORY(ORGANIC): C&W ANAL LAB CONTRACT LABORATORY(INORGANIC): RMAL

REMARKS:

SAMPLE LOG VERIFIED BY: MAM SAMPLE DATA VERIFIED BY: FAM
REMARKS

*****FOOTNOTES*****
*AVERAGE VALUE * ANALYZED *MAJOR INTERFERENCES
*J=ESTIMATED VALUE *N=RESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*I=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEMS

ATHENS, GEORGIA

01/03/83

METALS DATA REPORTING SHEET
WATER

RESULTS	UNITS	ELEMENT	STORED
1041	UG/L	SILVER	0107
600	UG/L	ARSENIC	01002
NA	UG/L	BORON	01022
620	UG/L	BARIUM	01022
1041	UG/L	BERYLLIUM	01022
	UG/L	CARMITUM	01022

PROJECT NO: 83-0210 PROGRAM ELEMENT: SSP
SOURCE: LET'S LANE LANDFILL STATE: KY
CITY: LOUISVILLE STATION ID: STATION NO: 1
STATION ID: STATION NO: 1 TEACHATE #1
SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 00
COLLECTED BY: WILSON RECEIVED FROM: BILL BOKEY
SAMPLE REC'D BY: DATE/TIME 11/03/82 REC'D BY: D COLAURIT
SEALED: YES
CHEMIST: MAW
ANALYTICAL METHOD:

LEAD
 SELENIUM
 TIN
 TRONIUM
 TERLURIUM
 TITANIUM
 VANADIUM
 ZIRTRIUM
 ZINC
 ZIRCONIUM
 MERCURY
 ALUMINUM
 CALCIUM
 CANGANESE
 MAGNESIUM
 IRON
 CHROMIUM, HEXAVALENT

49-36000

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REMARKS
SAMPLE LOG VERIFIED BY TEE
SAMPLE DATA VERIFIED BY KHM

REMARKS

AVERAGE VALUE WAS NOT ANALYZED AND INTERFERENCES ESTIMATED VALUE. NO PRESUMPTIVE EVIDENCE OF MATERIAL ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN. SUBSTANTIAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN. MATERIAL VALUE WAS ANALYZED FOR RUT. NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

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LEE 001

000491

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS UNITS PARAMETER
0.004 MG/L CYANIDE

STORET
00720

01/03/83

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 83C 233 SAMPLE TYPE: LEACH

PROJECT NO.: 83-0210 PROGRAM ELEMENT: 6SF
SOURCE: LEE'S LANE LANDFILL

STATE: KY

CITY: LOUISVILLE
STATION I.D.: LLE-1 LEACHATE #1

STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 0

COLLECTED BY: C. H. WILSON RECEIVED FROM: BILL BOKEY
SAMPLE REC'D: DATE/TIME 11/05/82 735 REC'D BY: D COLQUITT
SEALED: YES

CHEMIST: GKB CHEMIST:
ANALYTICAL METHOD:

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: TBB DATA VERIFIED BY: GKB

REMARKS

*****FOOTNOTES*****

*A=AVERAGE VALUE *NA=NOT ANALYZED *N/A=INTERFERENCES
*J=ESTIMATED VALUE *N/PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

0000491

LEE 001

00049

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD, REG IV
ATHENS GEORGIA

03/01/83

MISCELLANEOUS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 83C-252 SAMPLE TYPE: LEACH

PROJECT NO.: 83-021 PROGRAM ELEMENTS: SSF
SOURCE: LEE'S LANE LANDFILL
CITY: LOUISVILLE STATE: KY

STATION I.D.: LL-LE-1W
STORET STATION NO.:

SAMPLE COLLECTION: START DATE/TIME 11/03/82 1111
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00 0

COLLECTED BY: C.H. WILSON RECEIVED FROM:
SAMPLE REC'D: DATE: / TIME: 00/00/00 0 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 1399 ORG SAMPLE NO.: D 1418 INORG SAMPLE NO.: MD 9116
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): RHAL

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: MAW DATA VERIFIED BY: JMS

REMARKS
V=PURGEABLE ORGANIC, EM=EXTRACTABLE ORGANIC, P=PESTICIDE ANALYSIS
RESULTS ESTIMATED=QC LIMITS EXCEEDED=PURGEABLES

*****ANALYTICAL RESULTS*****

AN RESULTS IN: UG/L	COMPOUND NAME
V 5U	ACETONE
V 5U	METHYL ETHYL KETONE
V 1U	CARBON DISULFIDE
V 5U	METHYL BUTYL KETONE
V 5U	METHYL ISOBUTYL KETONE
V 5U	STYRENE
E 100U	VINYL ACETATE
E 5U	BENZOIC ACID
E 5U	2-METHYLPHENOL
E 100U	4-METHYLPHENOL
E 200U	2,4,5-TRICHLOROPHENOL
E 5U	ANILINE
E 100U	BENZYL ALCOHOL
E 200U	4-CHLOROANILINE
E 5U	DIBENZOFURAN
E 100U	2-METHYL NAPHTHALENE
E 100U	2-NITROANILINE
E 100U	3-NITROANILINE
E 100U	4-NITROANILINE

*****FOOTNOTES*****

*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

0000077

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-830/RFG

ATHENS, GEORGIA

02/24/83 PURGEABLE ORGANICS ANALYSIS DATA REPORTING SHEET

WATER

SAMPLE NO.: 83C 252 SAMPLE TYPE: LEACH

RESULTS	UNITS	COMPOUND	STORED
100U	UG/L	ACROLEIN	34210
100U	UG/L	ACRYLONITRILE	34215
100U	UG/L	CHLOROMETHANE	34418
100U	UG/L	BROMOMETHANE	34419
100U	UG/L	VINYL CHLORIDE	34473
100U	UG/L	CHLOROETHANE	34475
100U	UG/L	METHYLENE CHLORIDE	34476
100U	UG/L	1,1-DICHLOROETHENE	34477
100U	UG/L	1,1-DICHLOROETHANE	34478
100U	UG/L	TRANS-1,2-DICHLOROETHENE	34479
100U	UG/L	CHLOROFORM	34480
100U	UG/L	1,1,2-TRICHLOROETHANE	34481
100U	UG/L	1-BROMOETHANE	34482
100U	UG/L	BROMOCHLOROMETHANE	34483
100U	UG/L	1,2-DICHLOROPROPANE	34484
100U	UG/L	TRANS-1,3-DICHLOROPROPENE	34485
100U	UG/L	TRICHLOROETHENE	34486
100U	UG/L	BENZENE	34487
100U	UG/L	1,1,2,2-TETRACHLOROETHANE	34488
100U	UG/L	1,1,2-TRICHLOROETHANE	34489
100U	UG/L	CIS-1,3-DICHLOROPROPENE	34490
100U	UG/L	2-CHLOROPHENYL VINYL ETHER	34491
100U	UG/L	BROMOPROPANE	34492
100U	UG/L	1,1,2,2-TETRACHLOROETHANE	34493
100U	UG/L	TOLUENE	34494
100U	UG/L	CHLOROBENZENE	34495
100U	UG/L	ETHYL BENZENE	34496
100U	UG/L	4-XYLENE	34497
100U	UG/L	OXYGENE(MIXED)	34498

000497

LEE 001

*****ANALYTICAL RESULTS*****
 PROJECT NO.: 83-021 PROGRAM ELEMENT: 3SF
 SOURCE: LEE'S LANE LANDFILL CITY: LOUISVILLE STATE: KY
 STATION STATION 6LUE-1W
 SAMPLE COLLECTION: START DATE/TIME 11/03/82 1115
 SAMPLE COLLECTION: STOP DATE/TIME 06/00/00
 COLLECTED BY: S.H. WILSON RECEIVED FROM: 0 REC'D BY:
 SAMPLE REC'D DATE/TIME 06/00/00 REC'D BY:
 SEALED!
 CHEMIST FAM: PAM ANALYTICAL METHOD: 624-81
 CASE NO.: 1399-ORG SAMPLE NO.: D-1418 INORG SAMPLE NO.: MD-9116
 CONTRACT LABORATORY(INORGANIC): RYAL
 REMARK:
 SAMPLE DOG VERIFIED BY: PAM SAMPLE DATA VERIFIED BY: PAM
 REMARKS
 RESULTS ESTIMATED--AC LIMITS EXCEEDED--PURGEABLES

*****FOOTNOTES*****
 *A=AVGAGE VALUE *N=NOT ANALYZED *M=INTERFERENCES OF MATERIAL
 *J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
 *K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
 *L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
 THE VINYLMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM

EPA-FSD REGIV

ATHENS, GEORGIA

02/24/83 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 83C 252 SAMPLE TYPE: LEACH

PROJECT NO.: 83-021 PROGRAM ELEMENT: SSF

SOURCE: LOUISVILLE LANDFILL STATE: KY

STATION ID: 44-LE-14

STURET STATION NO:

SAMPLE COLLECTION START DATE/TIME 11/03/82 1115

SAMPLE COLLECTION STOP DATE/TIME 06/00/00

COLLECTED BY: G.H. WILSON RECEIVED FROM: RY

SAMPLE REC'D: 5/18/83 TIME 00/00/00 FROM ID: RY

SEALED:

CHEMIST: HUR

ANALYTICAL METHOD:

CASE NO.: 1399 DRG SAMPLE NO.: D 1418 INDRG SAMPLE NO.: MD 9116
CONTRACT LABORATORY (INORGANIC): RMAL

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: MAH DATA VERIFIED BY: JMW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND	STORED
0.050	UG/L	ALDRIN	39330
0.050	UG/L	HEPTACHLOR	39410
0.050	UG/L	HEPTACHLOR EPOXIDE	39420
0.050	UG/L	ALPHA-BHC	39337
0.050	UG/L	BETA-BHC	39338
0.050	UG/L	DELTA-BHC	39340
0.050	UG/L	ENDOSULFAN I (ALPHAS)	39361
0.050	UG/L	ENDOSULFAN II (BETA)	39380
0.050	UG/L	ENDOSULFAN SULFATE	39390
0.050	UG/L	CHLORDANE (TECHNICAL MIXTURE)	39320
0.050	UG/L	PCP-1242 (AROCLOL 1242)	39350
0.050	UG/L	PCP-1254 (AROCLOL 1254)	39504
0.050	UG/L	PCP-1221 (AROCLOL 1221)	39451
0.050	UG/L	PCP-1232 (AROCLOL 1232)	39492
0.050	UG/L	PCP-1249 (AROCLOL 1249)	39500
0.050	UG/L	PCP-1260 (AROCLOL 1260)	39508
0.050	UG/L	PCP-1016 (AROCLOL 1016)	39471
0.050	UG/L	TOXAPHENE	39400
0.050	UG/L	ENDO-ALDEHYDE	34356
0.050	UG/L	TCDD(CODIUM)	34375
0.050	UG/L	CHLORDENE /2	77884
0.050	UG/L	ALPHA-CHLORDENE	39475
0.050	UG/L	ALPHA-CHLORDENE /2	39480
0.050	UG/L	ALPHA-CHLORDENE /2	39481
0.050	UG/L	AMMA-CHLORDENE /2	39482
0.050	UG/L	TRANS-MONACHLOR	39071
0.050	UG/L	ALPHA-CHLORDANE /2	39349
0.050	UG/L	CLIS-4-NONACHLOR	39069
0.050	UG/L	METHOXYCHLOR	39480

000498

LEE 001

*****FOOTNOTES*****

*A=AVGAGE VALUE *NA=NOT ANALYZED *N/A=INTERFERENCES

*J=ESTIMATED VALUE *N/PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL

*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN

*N=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS

THE MINIMUM DETECTION LIMIT

1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

2. CONSTITUENTS OF TECHNICAL CHLORDANE.

LEE 001

000499

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REG IV
ATHENS, GEORGIA
02/22/83 EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 83C 252 SAMPLE TYPE: LEACH

PROJECT NO.: 83-021 PROGRAM ELEMENT: SSF
CITY: LOUISVILLE STATE: KY
STATION STATION NO.: L-L-E-1W
SAMPLE COLLECTION! START DATE/TIME 11/03/82 1115
SAMPLE COLLECTION! STOP DATE/TIME 00/00/00 0
COLLECTED BY: S.H. WILSDY
SAMPLE REC'D: DATE/TIME 00/00/00 0 REC'D BY:
SEALED!

CHEMISTI JVS
ANALYTICAL METHOD:

CASE NO.: 13999 ORG SAMPLE NO: D 1418 INORG SAMPLE NO.: MD 9116
CONTRACT LABORATORY(ORGANIC): CML ANAL LAB
CONTRACT LABORATORY(INORGANIC): RML

REMARK:

SAMPLE LOG VERIFIED BY: YAM DATA VERIFIED BY: DGR

REMARKS

FOOTNOTES
*A= AVERAGE VALUE *V=A NOT ANALYZED *N=A INTERFERENCES
*J=ESTIMATED VALUE *W=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND	STORET
NA	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE	344348
400	UG/L	BENZIDINE	39120
100	UG/L	1,3-DICHLOROBENZENE	34566
100	UG/L	1,4-DICHLOROBENZENE	34571
100	UG/L	1,4-(2-DICHLOROETHYL) ETHER	34576
100	UG/L	HEXA(2-CHLOROETHANE-N-PROPYL) AMINE	34273
200	UG/L	NITROBENZENE	34396
100	UG/L	1,2,4-TRICHLOROBENZENE	34427
100	UG/L	BIS(2-CHLOROETHOXY) METHANE	34551
200	UG/L	BISOPHORONE	34408
100	UG/L	2-CHLORONAPHTHALENE	34386
100	UG/L	2-CYANOPHENYLTHYLENE	34200
100	UG/L	ACENAPHTHENONE	34205
100	UG/L	DIMETHYL PHTHALATE	34341
200	UG/L	2,4-DINITROTOLUENE	34611
200	UG/L	2,6-DINITROTOLUENE	34626
100	UG/L	2,4-CHLOROPHENYL PHENYL ETHER	34641
100	UG/L	FLUORENE PHTHALATE	34381
100	UG/L	NITROSODIPHENYLAMINE/DIPHENYLAMINE	34436
100	UG/L	HEXA(2-CHLOROPHENYL) PHENYL ETHER	39706
100	UG/L	4-AROMOPHENYL PHENYL ETHER	34461
100	UG/L	PHENANTHRENE	34420
100	UG/L	DIBUTYL PHTHALATE	34376
100	UG/L	4-CHLOROPHENYL PHENYL ETHER	34469
100	UG/L	PYRENE	34469
100	UG/L	BENZYL BUTYL PHTHALATE	34292
100	UG/L	BENZO(A)ANTHRACENE	34526
100	UG/L	CHRYSENE	34320
100	UG/L	3,4-CHLOROPHENYLIDINE	34631
100	UG/L	DI-4-OCTYL PHTHALATE	34596
200	UG/L	BENZO(A AND/OR K)FLUORANTHENE(TOTAL)	39100
-	UG/L	BENZO(H AND/OR K)FLUORANTHENE(TOTAL)	34477
200	UG/L	INDENO(1,2,3-CD) PYRENE	34403
200	UG/L	DIBENZO(CA)ANTHACENE	34556
200	UG/L	BENZO(GH)PERYlene	34521
200	UG/L	2-CHLOROPHENOL	34586
100	UG/L	PHENOL	34591
100	UG/L	2,4-DIMETHYLOPHENOL	34694
100	UG/L	2,4-DICHLOROPHENOL	34606
100	UG/L	2,4,6-TRICHLOROPHENOL	34621
100	UG/L	4-CHLORO-3-METHYLOPHENOL	34452
500	UG/L	2,4-DIVITROPHENOL	34616
200	UG/L	2-METHYL-4,6-DIVITROPHENOL	34657
500	UG/L	PENTACHLOROPHENOL	39032
	UG/L	4-NITROPHENOL	34646

LEE 001

000500

**For Earth resistivity
Survey Drawings Refer to
Volume 6 of the Original
Documents**

LEE 001

000501

**For Magnetometer
Resistivity Maps Refer to
Volume 6 of the Original
Documents**